



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,974	01/29/2004	Brian T. Denton	BUR920040009US1	1973

29154 7590 07/20/2009  
FREDERICK W. GIBB, III  
Gibb Intellectual Property Law Firm, LLC  
2568-A RIVA ROAD  
SUITE 304  
ANNAPOLIS, MD 21401

EXAMINER
----------

KARDOS, NEIL R

ART UNIT	PAPER NUMBER
----------	--------------

3623

MAIL DATE	DELIVERY MODE
-----------	---------------

07/20/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/707,974		DENTON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Neil R. Kardos		3623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/8/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This is a **NON-FINAL** Office Action on the merits in response to the request for continued examination filed on April 16, 2009. Currently, claims 1-27 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 13, 2009 has been entered.

#### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Response to Amendment***

Applicant's amendments to the claims are sufficient to overcome the § 101 rejections set forth in the previous Office Action. Accordingly, the § 101 rejections have been withdrawn.

Applicant's amendments to the claims are NOT sufficient to overcome the § 112 rejections set forth in the previous Office Action. This rejection has been re-asserted and clarified below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 1, 8, 15, and 21: Examiner does not understand the claimed invention recited in these claims. The claims recite a method for determining a production plan, comprising (1) rescheduling purchase order receipts to be received during an earlier time period, (2) solving core production planning equations (presumably, to create a production plan that includes the purchase order receipts), and (3) rescheduling purchase order receipts to be received during a later time period. Based on these steps, it is not clear how the production plan is created. The output file is based on the solving of core production plans and the rescheduling of purchase order receipts to later time periods. Which of these steps creates the production plan – the solving or the rescheduling? Is the production plan created with the purchase order receipts scheduled to be received during an earlier time or during a later time? What is the actual production plan? The preamble recites determining a production plan, yet there is no clear step in which the plan is created – the final step merely outputs a file based on solving and rescheduling for purchase order receipts. Clarification of the claimed invention is required. Due to these deficiencies, Examiner has applied art to the claimed invention as best understood.

Art Unit: 3623

Claims 2-7, 9-14, 16-20, and 22-27: The dependent claims are rejected for failing to remedy the deficiencies of the claims from which they depend.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 2, 4-10, 12-17, 19-23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edstrom (US 5,233,533).**

Claim 1: Edstrom discloses a computer-implemented method for determining a production plan, said method comprising:

- receiving, by a computer, a first file comprising purchase order receipts, said purchase order receipts being defined as line items on purchase orders (see column 1: lines 9-12, 37-39, and 58-60, disclosing determining materials and parts that must be available in order to schedule production; column 2: lines 1-4 and 49-50, disclosing the same; column 3: lines 17-20, disclosing the same; column 5: lines 16-34 and 47-50, disclosing product numbers on orders; column 10: lines 33-59; column 11: lines 50-60; column 11: line 6, disclosing purchase orders);
- performing, by said computer, a first rescheduling process comprising rescheduling when said purchase order receipts are to be received by a plant so as

Art Unit: 3623

to indicate that said purchase order receipts will be received by said plant during earlier time periods than initially specified (see column 2: lines 5-43; column 10: line 60 through column 12: line 24; in column 2: lines 13-21, the reference discloses scheduling an event from the earliest allocated date);

- after said performing of said first rescheduling process, solving core production planning system equations using reschedule purchase order receipts associated with said earlier time periods from said first rescheduling process (see id.; the reference discloses creating a production plan);
- after said solving, performing, by said computer, a second rescheduling process comprising rescheduling when said rescheduled purchase order receipts from said first rescheduling process are to be received by said plant so as to indicate that said rescheduled purchase order receipts will be received by said plant during later time periods than specified during said first rescheduling process (see id.; in column 2: lines 32-43, the reference discloses rescheduling the target due date into the future); and
- outputting, by said computer, a second file based on said solving and said second rescheduling process (see id.; the reference creates a production plan).

Although Edstrom is directed to rescheduling the production events that need to occur in order to deliver to customers rather than rescheduling purchase order receipts, Edstrom considers that purchase order receipts (i.e. raw materials) are required in order to carry out the production events. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reschedule purchase order receipts necessary to carry out the rescheduled

Art Unit: 3623

production events of Edstrom. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained through just-in-time manufacturing.

Claim 2: Edstrom discloses wherein said first rescheduling process is based upon a field that indicates whether a receipt may be rescheduled to an earlier point in time. (See column 10: lines 60-67, disclosing start and end dates for manufacturing; column 2: lines 14-18, disclosing a range of earlier available dates for rescheduling).

Claim 4: Edstrom discloses wherein said second rescheduling process is based upon one of a date of need (see at least column 2: lines 1-4, disclosing a need date for materials; column 2: lines 10-11, disclosing a target due date), frozen zone rules, and date tolerances (see at least column 2: lines 14-15, disclosing a range of dates).

Claim 5: Edstrom discloses after said solving, sorting of said rescheduled purchase order receipts from said first rescheduling process. (See column 11: lines 30-67, disclosing sorting the orders by the amount of slack time).

Claim 6: Edstrom discloses wherein said sorting is based upon one of arrival dates, purchase order receipt quantity, and the flexibility of purchase order receipt movement with respect to frozen zone rules (see id.).

Art Unit: 3623

Claims 7, 13, 20, and 26: Edstrom discloses recomputing ending inventory levels to reflect said second rescheduling process (see column 2: lines 49-50, disclosing tracking and maintaining inventory).

Claims 8-10, 15-17, 21-23: Claims 8-10 and 16-17 are substantially similar to claims 1-2 and 5-6, and are rejected under similar rationale.

Claims 12, 19, and 25: Edstrom discloses wherein if a purchase order receipt timing can be extended beyond the latest date of the planning horizon of said linear programming production planning system, said purchase order receipt is eliminated. (See column 5: lines 26-34, disclosing processing only a week's worth of orders, etc.).

Claims 14 and 27: Edstrom discloses wherein said second rescheduling process limits rescheduling to comply with contractual obligations and to avoid trivial rescheduling (see column 1: lines 5-8, disclosing complying with a shipment date).

**Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edstrom (US 5,233,533) in view of Kern, "Master Production Rescheduling Policy in Capacity-Constrained Just-In-Time Make-To-Stock Environments."**

Claim 3: Edstrom does not explicitly disclose wherein first rescheduling process is based upon frozen zone rules. Kern discloses frozen zone rules (see page 366: ¶ 1, disclosing freezing a portion of the master planning schedule; see also the first and last paragraph on page 368,



Art Unit: 3623

disclosing rigid time fences and frozen intervals; the last paragraph on page 369, disclosing frozen intervals). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include frozen zone rules as taught by Kern when performing the scheduling of Edstrom. One of ordinary skill in the art would have been motivated to do so for the benefit of coping with demand uncertainty. (See Kern: page 366: ¶ 1).

**Claims 11, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edstrom (US 5,233,533) in view of Lilly (US 6,088,626).**

Claims 11, 18, and 24: Edstrom does not explicitly disclose the limitations of this claim. Lilly discloses wherein said post-processing rescheduling process reschedules the timing of each of said purchase order receipts into the latest time period before the corresponding inventory level would be depleted to zero (see column 11: lines 13-45; columns. 9-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the core processing of Edstrom to reschedule the timing of purchase orders into the latest time period before inventory reaches zero as disclosed by Lilly. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained through just-in-time manufacturing.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

Art Unit: 3623

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos  
Examiner  
Art Unit 3623

/Neil R. Kardos/  
Examiner, Art Unit 3623  
/Jonathan G. Sterrett/  
Primary Examiner, Art Unit 3623